USGS science for a changing world

Water Science for Schools

Industrial water use

Pulp and paper mill, St. Marys, Georgia, USA
Credit: Alan M. Cressler, USGS

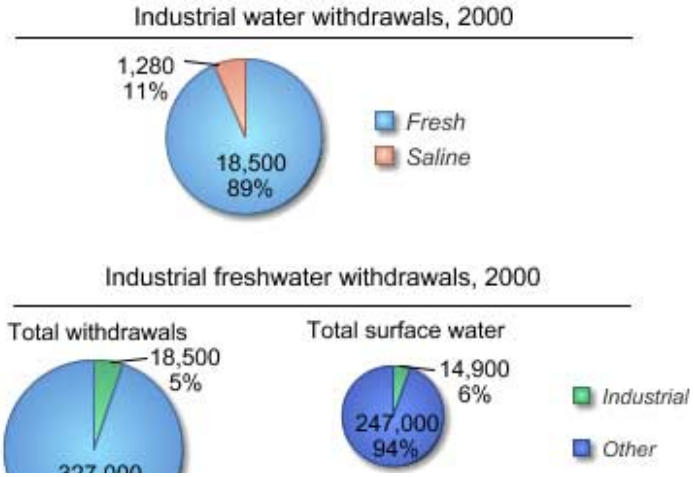
The industries that produce metals, wood and paper products, chemicals, gasoline and oils, and those invaluable grabber utensils your dad uses to pull out the car keys you dropped into the garbage disposal are major users of water. Probably every manufactured product uses water during some part of the production process. Industrial water use includes water used for such purposes as fabricating, processing, washing, diluting, cooling, or transporting a product; incorporating water into a product; or for sanitation needs within the manufacturing facility. Some industries that use large amounts of water produce such commodities as food, paper, chemicals, refined petroleum, or primary metals.

Summary of industrial water withdrawals, 2000

For 2000, withdrawals were an estimated 19,700 million gallons per day (Mgal/d), or 22,100 thousand acre-feet per year. Industrial withdrawals were about 5 percent of total withdrawals and about 9 percent of total withdrawals for all categories excluding thermoelectric power. Surface water was the source for 82 percent of total industrial withdrawals. Nearly all (92 percent) of the surface-water withdrawals and nearly all (99 percent) of the ground-water withdrawals for industrial use were freshwater. For 2000, total industrial withdrawals were 11 percent less than during 1995.

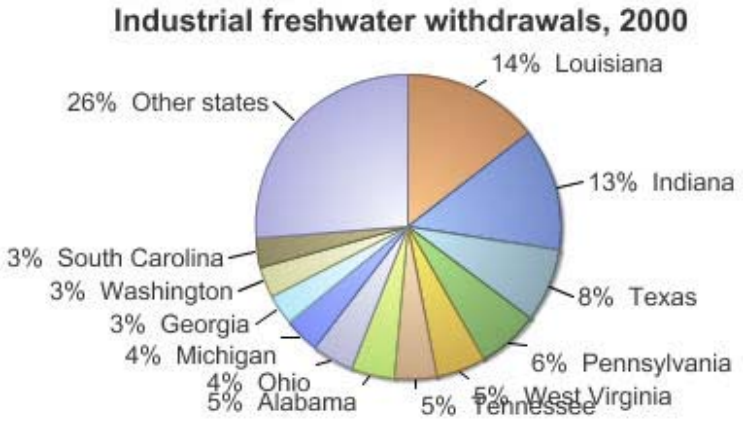
Industrial water withdrawals for the Nation, 2000

For 2000, withdrawals were an estimated 137,000 million gallons per day (Mgal/d), or 153,000 thousand acre-feet per year. Irrigation withdrawals were 40 percent of total freshwater withdrawals and 65 percent of total freshwater withdrawals for all categories excluding thermo-electric power. Surface water accounted for 58 percent of the total irrigation withdrawals. About 61,900 thousand acres were irrigated in 2000. Of this total acreage, about 29,400 thousand acres were irrigated with surface (flood) systems; 28,300 thousand acres with sprinkler systems;

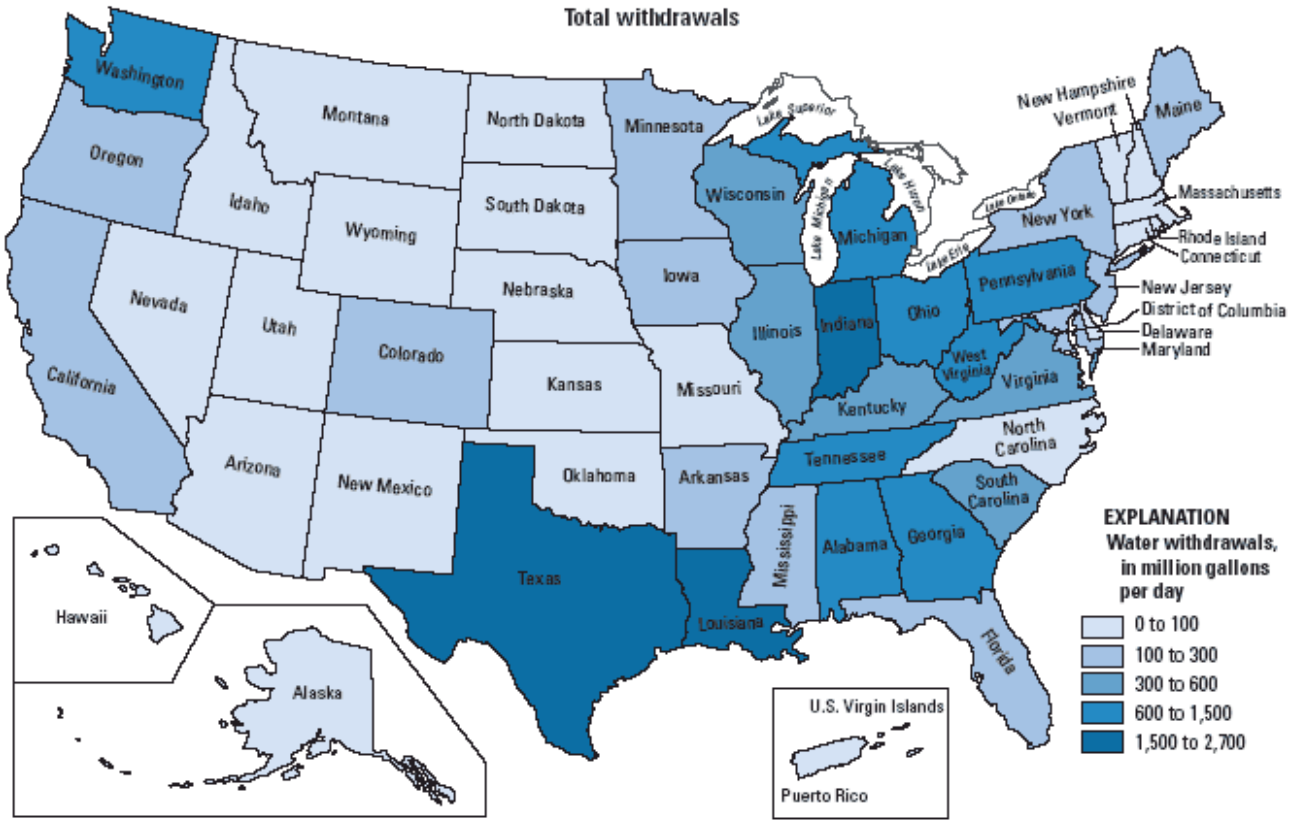


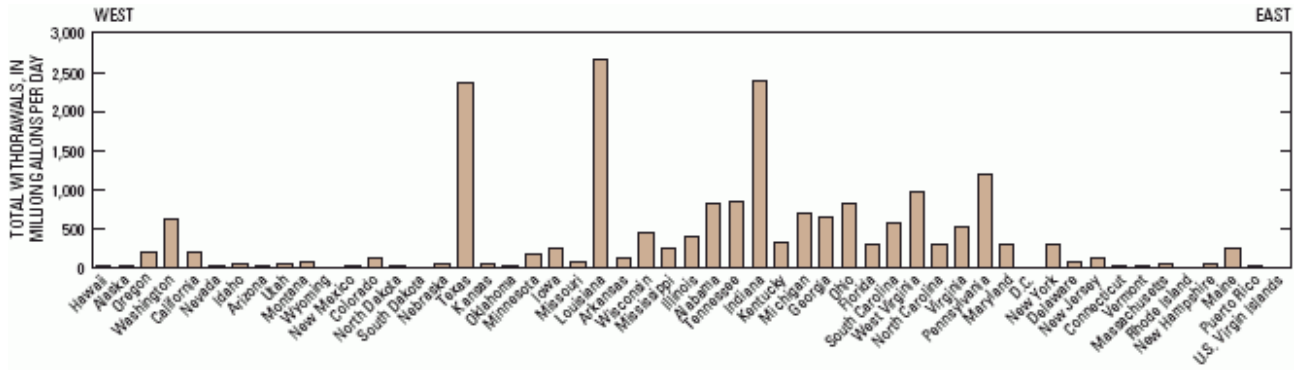
and 4,180 thousand acres with micro-irrigation systems. Application rates were calculated by dividing total withdrawals by irrigated acres. The average application rate was 2.48 acre-feet per acre for the United States.

Industrial water withdrawals, by State, 2000



As you might expect, states such as Indiana, Texas, West Virginia used a lot of water in 2000 for industrial purposes. But, Louisiana was first, using about 2,680 million gallons of water per day, mainly in the chemical and paper industries. Louisiana, Indiana, and Texas accounted for almost 38 percent of total industrial withdrawals, while Louisiana and Indiana accounted for 32 percent of the total fresh surface-water withdrawals. The largest fresh ground-water withdrawals were in Georgia, Louisiana, and Texas, which together accounted for 23 percent of the total fresh ground-water withdrawals. Texas accounted for 71 percent of the saline surface-water withdrawals for industry.
[d] - Data for this pie chart are available.





Sources and more information

Estimated Use of Water in the United States in 2000, USGS Circular 1268:

- Industrial water use, 2000: Summary | Data table, by State | National map

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Related Topics

Industrial water use data table ◆ Industrial water use map

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